

REMARKS/ARGUMENTS

Claims 1 - 21 have been rejected under 35 U.S.C. Section 103 as unpatentable over various combinations of Williams, U.S. Patent Number 5,850,548 in view of Vassallo, U.S. Patent Number 6,157,194, McDonald, U.S. Patent Number 6,053,951, and cited articles by Fox and Johnson. In response, claims 1 – 21 have been cancelled and new claims 22 – 29 have been added. Consideration of the new claims is respectfully requested.

New claims 22 – 29 clarify that the present invention is a medical imaging system which includes a visual application development system for developing pulse sequences which are downloaded to a pulse sequence server to drive RF and gradient coils to perform a medical imaging scan. The medical imaging system allows a user to visually assemble a scan, which greatly increases the efficiency of the system because operators of MRI systems are not typically proficient programmers. Furthermore, the system allows a user to view the pulse sequence to be executed, in a format which is familiar to the user. The present invention therefore provides a significant improvement in ease of use of scanning equipment.

Vassallo discloses an MRI control system employed on a personal computer system, and configured to control MRI system hardware directly. Vassallo does not teach or suggest visual programming of pulse sequence.

Williams discloses a computer system with a visual development environment. The visual development environment includes an interface having a component inspector, component manager, component library, and one or more visual editors. In operation, a user constructs a program by selecting one or more components from the

library, which displays the components. Using a visual editor of the system, the user may modify the logic of individual components, connect the components via component ports, and nest components within other components to an arbitrary level. Williams does not suggest medical imaging or the use the visual development system for developing a control program for use in medical imaging.

McDonald discloses a man/machine interface (MMI) graphical code generation wizard. The wizard associates a front panel control/indicator with a tag for monitoring a control loop. Among the front panel controls are waveform chart indicators which can be used to monitor a real-time trend. The Wizard, therefore, allows a user to set up a real-time waveform monitoring process. McDonald neither teaches nor suggests programming scans for medical imaging systems.

The Fox reference is a manual for writing code in Visual Basic, and is cited particularly for illustrating visual code for producing graphs. Johnson is cited for disclosing serialization of Java Beans. Neither of these references discusses medical imaging, or visual programming methods for controlling a scan.

None of these references therefore teach or suggest a MRI system which can be programmed to perform a scan using visual programming techniques. The Applicants, therefore, believe that new claims 22 – 29 are patentably distinguished over the prior art, and respectfully request that a notice of allowance be issued.

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Conclusion

In view of the foregoing amendments and arguments, the Applicants submit that the present invention is in condition for allowance, and respectfully request that a notice of allowance for claims 1 – 5, 8 – 16, and 18 - 21 be issued.

The Commissioner is hereby authorized to charge Deposit Account 07-0845 for Petition and Fee for One Month Extension of Time and RCE fee. No other fees are believed necessary. However, if any other fees are necessary, please charge Deposit Account 07-0845.

Respectfully submitted,

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